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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/826,212	04/17/2004	Douglas H. Anders		1157

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EXAMINER

LEWIN, ALLANA

ART UNIT	PAPER NUMBER
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3764

DATE MAILED: 03/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/826,212	Applicant(s) ANDERS ET AL.	
	Examiner Allana Lewin	Art Unit 3764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 13, 16 and 17 is/are rejected.
- 7) ☐ Claim(s) 10-12, 14 and 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Slawinski et al. (US Pat. No. 6,293,892).
3. Slawinski discloses a free weight assistance device comprising a base (103 and 137), a generally upright weight support structure (note Figure 1), a free weight support bar (211), and two cables mounted on the upright weight support structure (107A and 107B). Slawinski discloses engagement blocks (125A and 125B) that are mounted on the base and generally adjacent the upright support structure and that maintain the

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tension on the cable assemblies (column 3, lines 65-67), but teaches that a microprocessor can be utilized to perform the control and logic operations of the apparatus (column 12, lines 18-21) and would therefore substitute for and perform the functions of the engagement blocks. Slawinski therefore anticipates Applicant's recitation of a 'computer-controlled weight tensioning device'. Slawinski discloses that the apparatus provides weight support assemblies capable of raising, lowering and statically supporting the full weight of the free weights (column 2, lines 26-29), which would thereby provide assistance to the user during lifting.

4. Regarding claim 3, Slawinski discloses main weight support posts (note Figure 1) as well as main support beams mounted atop the main weight support posts (105A and 105B).

5. Regarding claim 4, the Slawinski device comprises touch sensors (239A and 239B) on the free weight support bar that are activated by the user's hand and permits use of the device when activated (column 9, lines 49-56 and column 9, line 65-66).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Slawinski in view of Jones (US Pat. No. 5,554,089).

8. Slawinski, discussed in detail above, fails to disclose two base feet having leveling pads mounted on their underside.

9. Jones discloses an exercise machine comprising a base with two bottom sections (68 and 69), which comprehend Applicant's 'base feet', that have mountings (81, 82, 83, 84, 85), which comprehend Applicant's 'leveling pads', secured to the bottom sections (note Figure 1) to support the frame above the floor (column 6, lines 28-33).

10. It is well known in the art to include pads or mountings on the underside of base members in order to provide stability to the device as well as to ensure it remains secure. Furthermore, based on the teachings of Jones it would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized mountings or 'leveling pads' in the Slawinski device in order to achieve greater stability and to ensure the device is secured while in use.

11. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Slawinski in view of Millington et al. (US Pat. No. 6,949,052).

12. Slawinski, discussed in detail above, fails to disclose the handle grip sensing device further comprising light-sensitive sensing units. Slawinski does teach that a proximity sensor may be used (column 9, lines 66-67).

13. Millington discloses an exercise equipment locator and teaches that light sensors, mounted on the handle or grip of a dumbbell, may be used as an in-use sensor (column 6, lines 50-58). Furthermore, Millington teaches that reception of the signal may require line of sight transmission that may be blocked by the user's hand gripping the device (column 6, lines 60-63). The Millington apparatus teaches a device that allows for fast and immediate location of a device as well as an indication of whether the device is in use.

14. Based on the teachings of Millington, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized light-sensitive sensing units in the Slawinski device as this type of sensor is well known in the art and allows for instant indication and verification that a device is in use.

15. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Slawinski in view of Harvey et al (US Pat. No. 6,280,361).

16. Slawinski, discussed in detail above, fails to disclose a computer-based control mechanism at least including a hard drive, motherboard, memory, and software.

17. Harvey discloses a computerized exercise system with a controlling structure that controls tension forces in cables connected to a weight lifting bar (note Figure 1A). Harvey teaches the controlling structure comprising a processor circuit (35) coupled with memory (36) and inherently a hard drive and software as Harvey teaches the user being able to enter parameters into the device for controlling the exercise system for execution by the device (column 9, lines 39-53).

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18. The use of computer-based control mechanism is well known in the art. Furthermore, based on the teachings of Harvey, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized a computer-based control mechanism including a hard drive, a motherboard with processor, memory and software in the Slawinski device so as to allow the user to customize exercises to their needs when exercising with the device, as well as to allow the user to monitor and record their physical activity for later evaluation (column 1, lines 24-33).

19. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Slawinski in view of Hepburn (US Pat. No. 3,690,654).

20. Slawinski, discussed in detail above, further discloses sheaves (109A, 109B, 111A and 111B) that are mounted on shafts (note Figure 1), which comprehends Applicant's cable reels and reel shafts, that rotate to allow the cables to extend or retract.

21. Slawinski fails to disclose the sheaves or reels being threaded.

22. Hepburn discloses a resistance exercise device with tension elements (16 and 17), or cables, wound on respective pulleys. Hepburn teaches that it is preferred that each pulley has a helically extending groove formed in its outer surface (column 3, lines 2-5) so that the cables naturally follow the groove and are wound properly (column 3, lines 47-52). The helically extending grooves taught by Hepburn comprehend Applicant's threaded reels.

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23. Based on the teachings of Hepburn, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized threaded or grooved sheaves/reels in the Slawinski device so as to ensure the cables are wound or taken up properly and therefore preventing the device from malfunctioning.

24. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Slawinski in view of Hepburn and further in view of Slawinski et al. (US Pat. No. 6,379,287), herein and further referred to as Slawinski '287.

25. Slawinski, discussed in detail above, fails to disclose drive motors having drive shafts, or clutches.

26. Slawinski '287 discloses a weight lifting spotting or assistance apparatus employing two reciprocating drives (96) with drive shafts (114) that are operatively connected to the pulleys (62) or reels. Furthermore, Slawinski '287 discloses a clutch (116) interposed between the pulleys and the drive shafts, with the clutch maintains *reciprocating* movement of the drives (column 8, lines 7-14). Slawinski '287 discloses a single clutch, however implementing two clutches would have been obvious and is well known in the art.

27. Based on the teachings of Slawinski '287, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized drives with drive shafts as well as clutches in the Slawinski device so as to provide better and greater assistance to the user, particularly when heavier weights are used, thereby

maximizing the effectiveness of the workout for the user while also protecting the user from possible injury during use.

28. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Slawinski in view of Hepburn in view of Slawinski '287 and further in view of Ryan (US Pat. No. 5,048,826).

29. Slawinski, discussed in detail above, fails to disclose sensor units mounted generally adjacent the reel shafts.

30. Ryan discloses a weight lifting device having a velocity sensor (27) adjacent the pulley in order to determine the speed and direction of rotation (column 4, lines 25-29). Ryan teaches the velocity sensor being connected to a controller in order to relay velocity information thereto (column 4, lines 29-31).

31. It is well known in the art to use sensors, and particular velocity sensors, in weight lifting devices in order to obtain information and data about a user's movement, but also as an added safety feature should the speed exceed a specified threshold (column 5, lines 3-7). Furthermore, based on the teachings of Ryan, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized sensor units in the Slawinski device for detecting rotational speed in order to obtain data and provide relevant feedback to one using the device, as well as to provide additional safety for the user.

32. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Slawinski in view of Ferrari (US Pat. 4,927,138).

33. Slawinski, discussed in detail above, fails to disclose a balance pad.

34. Ferrari discloses an exercise apparatus for performing resistance exercises (note Figures 4A and 4B) comprising a force plate (see proximate lead line 4), which comprehends Applicant's 'balance pad', that measures static or impulse load via sensors that relay user information to computing means which is then relayed and communicated to the user for purposes of monitoring and tracking their exercise (column 2, lines 5-12).

35. Based on the teachings of Ferrari, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized a force plate or 'balance pad' in the Slawinski device to further track and monitor a user's exercise and provide relevant feedback to the user for future improvement.

36. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Slawinski (US Pat. No. 6,293,892) in view of Slawinski (US Pat. No. 6,379,287) and further in view of Ryan (US Pat. No. 5,048,826).

37. Slawinski discloses a free weight assistance device comprising a base (103 and 137), a generally upright weight support structure (note Figure 1), a free weight support bar (211), and two cables mounted on the upright weight support structure (107A and 107B). Slawinski discloses engagement blocks (125A and 125B) that are mounted on the base and generally adjacent the upright support structure and that maintain the tension on the cable assemblies (column 3, lines 65-67), but teaches that a microprocessor can be utilized to perform the control and logic operations of the

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apparatus (column 12, lines 18-21) and would therefore substitute for and perform the functions of the engagement blocks. Slawinski therefore comprehends Applicant's recitation of a 'computer-controlled weight tensioning device'. Slawinski discloses that the apparatus provides weight support assemblies capable of raising, lowering and statically supporting the full weight of the free weights (column 2, lines 26-29), which would thereby provide assistance to the user during lifting. Slawinski further discloses sheaves (109A, 109B, 111A and 111B) that are rotatably mounted (note Figure 1), which comprehend Applicant's reels means, which rotate to allow the cables to extend or retract. These elements taught by Slawinski all operate cooperatively in assisting a user while performing a lift.

38. Slawinski fails to disclose drive means or sensor units that detect rotation of the reel means.

39. Slawinski '287 discloses a comparable apparatus comprising a reciprocating drive (96) that is operatively connected pulleys (62) or reel means.

40. Ryan discloses a weight lifting device having a velocity sensor (27) adjacent the pulley in order to determine the speed and direction of rotation (column 4, lines 25-29). Ryan teaches the velocity sensor being connected to a controller in order to relay velocity information thereto (column 4, lines 29-31).

41. Based on the teachings of Slawinski '287, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized drive means in the Slawinski device so as to provide better and greater assistance to the user, particularly when heavier weights are used, thereby maximizing the effectiveness

of the workout for the user while also protecting the user from possible injury during use. Furthermore, it is well known in the art to use sensors, and particular velocity sensors, in weight lifting devices in order to obtain information and data about a user's movement, but also as an added safety feature should the speed exceed a specified threshold (column 5, lines 3-7), and therefore, based on the teachings of Ryan, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized sensor units in the Slawinski device for detecting rotational speed in order to obtain data and provide relevant feedback to one using the device, as well as to provide additional safety for the user.

42. The modifications taught by Slawinski '287 and Ryan would operatively cooperate with the disclosed Slawinski device in further assisting a user while exercising with the apparatus.

43. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Slawinski (US Pat. No. 6,293,892) in view of Slawinski (US Pat. No. 6,379,287) in view of Harvey et al (US Pat. No. 6,280,361) and further in view of Ryan (US Pat. No. 5,048,826).

44. Slawinski discloses a free weight assistance device comprising a base (103 and 137), a generally upright weight support structure (note Figure 1), a free weight support bar (211), and two cables mounted on the upright weight support structure (107A and 107B). Slawinski discloses engagement blocks (125A and 125B) that are mounted on the base and generally adjacent the upright support structure and that maintain the

tension on the cable assemblies (column 3, lines 65-67), but teaches that a microprocessor can be utilized to perform the control and logic operations of the apparatus (column 12, lines 18-21) and would therefore substitute for and perform the functions of the engagement blocks. Slawinski therefore comprehends Applicant's recitation of a 'computer-controlled weight tensioning device'. Slawinski discloses that the apparatus provides weight support assemblies capable of raising, lowering and statically supporting the full weight of the free weights (column 2, lines 26-29), which would thereby provide assistance to the user during lifting. Slawinski further discloses sheaves (109A, 109B, 111A and 111B) that are rotatably mounted (note Figure 1), which comprehend Applicant's reels means, that rotate to allow the cables to extend or retract. These elements taught by Slawinski all operate cooperatively in assisting a user while performing a lift.

45. Slawinski fails to disclose drive means, a computer-based control device including software programming, or sensor units that detect rotation of the reel means.

46. Slawinski '287 discloses a comparable apparatus comprising a reciprocating drive (96) that is operatively connected pulleys (62) or reel means.

47. Harvey discloses a computerized exercise system with a controlling structure that controls tension forces in cables connected to a weight lifting bar (note Figure 1A). Harvey teaches the controlling structure comprising a processor circuit (35) coupled with memory (36) and inherently a hard drive and software as Harvey teaches the user being able to enter parameters into the device for controlling the exercise system for execution by the device (column 9, lines 39-53).

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48. Ryan discloses a weight lifting device having a velocity sensor (27) adjacent the pulley in order to determine the speed and direction of rotation (column 4, lines 25-29). Ryan teaches the velocity sensor being connected to a controller in order to relay velocity information thereto (column 4, lines 29-31).

49. Based on the teachings of Slawinski '287, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized drive means in the Slawinski device so as to provide better and greater assistance to the user, particularly when heavier weights are used, thereby maximizing the effectiveness of the workout for the user while also protecting the user from possible injury during use.

Additionally, the use of computer-based control mechanism is well known in the art, and therefore, based on the teachings of Harvey, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized a computer-based control mechanism including a hard drive, a motherboard with processor, memory and software in the Slawinski device so as to allow the user to customize exercises to their needs when exercising with the device, as well as to allow the user to monitor and record their physical activity for later evaluation (column 1, lines 24-33).

Furthermore, it is well known in the art to use sensors, and particular velocity sensors, in weight lifting devices in order to obtain information and data about a user's movement, but also as an added safety feature should the speed exceed a specified threshold (column 5, lines 3-7), and therefore, based on the teachings of Ryan, it would have been obvious to one having ordinary skill in the art at the time the invention was

made to have utilized sensor units in the Slawinski device for detecting rotational speed in order to obtain data and provide relevant feedback to one using the device, as well as to provide additional safety for the user.

50. The modifications taught by Slawinski '287, Harvey and Ryan would operatively cooperate with the disclosed Slawinski device in further assisting a user while exercising with the apparatus.

Allowable Subject Matter

51. Claims 10-12, 14 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

52. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

53. Slattery (US Pat. No. 6,632,159), Jones (US Pat. No. 6,228,000), and Ben-Yehuda et al. (US Pat. No. 6,358,188) all disclose weight lifting exercise devices having computer elements.

54. Ronan (US Pat. No. 5,314,394) discloses a weightlifting assistance device comprising a motor and clutch, as well as various sensors connected to a control unit that includes a microprocessor.


55. Wenman et al. (US Pat. No. 5,987,982), Meier et al. (US Pat. No. 4,986,534) and Gresko (US Pat. No. 4,014,398) all teach exercise devices having weight distribution detectors and relate to the user's balance.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allana Lewin whose telephone number is 571-272-5560. The examiner can normally be reached on Monday-Friday, 8AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Huson can be reached on 571-272-4887. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AL
2/23/2006



GLENN E. RICHMOND
PRIMARY EXAMINER